

## NOTES ON WILDLIFE CONSERVATION

One of the most misunderstood topics, when it comes to wildlife, tourism, National Parks, Wildlife Reserves, etc., is that of wildlife conservation. Few people realize that this touches every aspect of our lives, and not only to the welfare - or lack thereof - of a threatened species of monkey, bird, insect, or mammal in a faraway country with an exotic name.

It's quite difficult to cover such a vast topic in just a few paragraphs. We have 30 or 40 books on the subject alone, and the shortest, clearest, and most condensed among them is still 120 pages!

Let's start from the beginning... We'll stick to broad definitions, without entering into tons of small or big details, in order to keep to the principles. Also, we'll concentrate on "superior" life forms such as animals and plants.

On Earth, life comprises plants and animals.

Plants take their energy from the sun, and their nutrients from the soil. They need water to do that and to stay alive.

Animals take their energy and nutrients from plants, from other animals, or from both. They also need water to function and stay alive.

So, to have plants you need sunlight, suitable soil, and sufficient water.

To have herbivorous animals, you need plants, and sufficient water.

To have carnivorous animals, you need herbivorous animals, and sufficient water.

If the soil is not suitable for plant life, you have no plants and no animals.

Therefore the conditions of the soil, erosion, water, etc. are essential for all life, and the presence of sufficient and suitable plants and water is essential for animal life. You can't manage animal life without considering plants, water, and soil/ground/general landscape.

We have to mention that fish also rely on plants or other fish to live, and that the quality of the water in rivers, lakes, and oceans is influenced by what happens on land.

In the present situation on Earth, there are some 6 billion human beings alive and doing their possible best to stay so. To live, they need nutrients from animal sources and from plant sources. In order to obtain the millions of tons of daily food they need, humans have to cultivate plants and rear animals, since the yield from the land in natural conditions would be grossly insufficient even if the human population was an order of magnitude or two below the existing one.

Moreover, humans spend a lot of time doing things like reading, building, studying, learning, becoming doctors, lawyers, sailors, musicians, painters, and so on, and cannot be gathering food in the wild if they want to continue with their more interesting human activities.

The cultivation of food and the rearing of animals for food and other products need large expanses of land. On this farmed land, wild animals and wild plants are not welcome, since humans do not find it funny to see their crops eaten by deer, buffalo, birds, locusts or other animals, or to see their fields overrun by bushes, weeds, or trees.

So the "wild" expanses are in fact broken into thousands and thousands of "wild" islands floating on an ocean of human-inhabited or occupied land. These islands may be large, enormous, small, or very small, but they are islands nonetheless, more or less closed systems in which exchanges with other ecosystems are limited.

Now, what happens in a closed ecosystem left to itself is not what most people believe, i.e. "Nature find its balance". Nature is not a person or a reasoning entity, and things go wrong surprisingly fast.

Let's take an hypothetical ecosystem, say a 1000 Km<sup>2</sup> wildlife reserve surrounded by cultivated areas, and containing various animal populations.

Animal populations on the reserve have been carefully nurtured, the endangered ones have been thoroughly protected and followed, the extinct species have been reintroduced, and animal numbers are picking up.

It is clear that on a finite amount of land, you can only have a finite amount of plants. A finite amount of plants can only feed a finite amount of animals. But the catch in the wild, especially in Africa where you generally have a rainy season (with abundant rains) and a dry season (no rain at all for several months), is that the maximum number of animals you can sustainably feed on any given land is determined by the situation at the WORST of the dry period. No matter how green and full of rich grass, ponds, and rivers a land is at the end of the rainy season, it is only the food and water available when everything has dried up that counts.

The word "Sustainably" above is very important. It means that the animals will not eat anything more than what can regrow season after season, and not damage the soil, the water sources, or anything, thus ensuring that the supply of plants is constant and the environment remains healthy.

If the animals exceed the sustainable carrying capacity of the land, then they will start damaging the plants, eating them to a point where they can't regenerate fully. When the rain comes, the herds will be weaker, but will get better as the food is plentiful again, animals will reproduce, numbers will increase, they will try to leave the reserve and will compete with the neighbouring farmers, destroying their crops, leading the farmers to try and get rid of the animals with snares, poison, or whatever is available. Then the next dry season will come, and since there are even more animals than the year before it will be worse than the previous one.

Rain and drought have cycles, and every now and then there are particularly dry and long spells. Animals will die in great numbers, at times to the point of extinction, but not before

having scraped every little bit of food they can get, chewing plants down to the roots - or even including the roots, eating the bark of trees, anything they can to try and not die.

The consequence is that the vegetation will be permanently damaged. Some plant species will not recover, because opportunistic plants will take over. Some other animal species, dependent on plants that in turn depended on those damaged, will suffer and may disappear too. Rains will cause erosion, and wash away the fertile topsoil in many places.

After some years, with the weather situation returning to normal patterns, things may seem to have grown green and animals to be present again, but a careful survey of the land will show that the number of plant and animal species is lower than before, and that part of the land is degraded. The bio-diversity has diminished, and the ecosystem is more fragile. A few cycles like that, and the landscape can be turned into a semi-desert.

Predators play a very limited role in controlling the animal numbers when they are elevated. They can not, and by far, control an overpopulated area.

So, nature is not a manager, lions or leopards are not up to the task, and monkeys are just monkeys.

Wildlife management, and nature's management in general, is our responsibility as humans, because we can't escape the fact that such management is needed, and that we are the only living beings on the planet who can do the job.

From what is above, it becomes clear that once you have reached the point where animals are multiplying in a favourable environment, animal populations control is a serious headache.

There are not many ways to control animal numbers. You can relocate animals to areas where they are lacking. This is a difficult and expensive operation, and it has many limitations in terms of numbers that you can handle, and distance you can cover.

Or you can kill animals.

Here we come to the crux of the matter.

We kill millions of animals everyday to eat them, or to use their skins, or bones, or any other part we may need. Most of these animals, we rear them for the sole purpose of killing them.

What is the difference between an ox and an antelope, when the time to die comes? What gives us the rights over one and not over the other? We are meat eaters. We can't eat meat without killing.

As shown above, we have to manage the whole thing, willing or not. Because if we do not manage it, nobody else will, and everyone loses - us, the animals, the plants, and those who'll come after us.

Therefore, we have the same rights on any living animal, be it a sheep, a cow, an eland, a deer, or an elephant. No argument can be made to say that it is fundamentally OK to kill a sheep, but not a deer.

But we also have the same responsibility in respect of every living animal. If we are responsible for finding a pasture for a sheep, and for taking care of its well-being as long as it is alive, we can't say that we have no business with what happens to the deer.

If we take care of our fields, we have to take care of our forests, savannahs, grasslands.

When we realize that the bottom line is that we are responsible for the whole of our environment, it becomes much easier to understand that nature is a resource.

If we do not manage it properly, if we squander it, we will end up in bankruptcy - which means starving and dying.

If we treat our wild environment with the same care with which we treat our fields and our cattle, then all will prosper.

The paradox is that in order to not die, animals have to die.

A healthy population in a good environment grows anywhere from 3% to 20% annually for most species. It would not make sense to simply go out every year, and start killing animals by the thousand, leaving them to rot, just to keep things under control.

This is why in Europe, hunters are fully part of the wildlife management system. Animal populations are carefully studied, counted, and followed. Hunting quotas are then established, so that the populations remain at levels compatible with the vegetation available. Contrary to popular belief, hunters are not the enemies of wildlife, but the most dedicated conservationists you may find, and usually have a knowledge of nature far superior to that of many people who are convinced to be animal lovers themselves.

And here we come to what several people are trying to do across Africa.

In Africa, some of the poorest human populations live right by many National Parks, or Wildlife Reserves.

Why are the people living around the Parks and Reserves not allowed to touch anything just so that busloads of smiling tourists can take pictures of wild animals, while these same animals raid shambas (farms), destroy vital crops, kill cattle, maul and kill people? How do you expect the local villagers to NOT poach, when they are chronically short of every basic thing, and their highest hope of income from the Park is to sell an old calabash to a tourist for three times its market price?

Wildlife has been - and is - decimated throughout Africa with snares, traps, poison, spears, AK47. Sometime just for greed (rhino...), but most of the time simply as "bush-meat". Because people have no rights on it, are poor, are hungry, and only see wild animals as nuisances belonging to the Government or to strange foreign tourists.

But wildlife is a resource. African wildlife is an African resource. It is the local people's resource, not a faraway European or American old lady's resource, or a Minister's resource, or someone in the capital's resource. If the local communities benefit directly from the proceeds of consumptive and non-consumptive wildlife use, you instantly change thousands of poachers into the best guardians of the wild animals.

This is what we are working on. Because from there, we can establish sustainable wildlife management: by giving a value to wildlife, the people on whose land the wildlife lives become "owners", and with the proper guidance, they start to manage "their" wildlife resource so that it becomes sustainable. And in the world, only what has a value endures.